Creation Matters

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John Clement Whitcomb

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by Don DeYoung, PhD, President, Creation Research Society

John Whitcomb (left) with Henry Morris

Our friend, mentor, and theologian Dr. John (Jack) Whitcomb passed away on February 4, 2020, at age 95. His legacy continues as a major influence on the modern creation movement. The son of a U.S. army colonel, John spent several youthful years in northern China. During his undergraduate history studies at Princeton, John found the Lord as his Savior. This was at the Princeton Evangelical Fellowship under the leadership of Dr. Donald B. Fullerton. Princeton studies were interrupted by World War II duty, where John experienced active duty in Europe during 1944–46, including the Battle of the Bulge.

Moving on to Grace Theological Seminary, Winona Lake, IN, Dr. Whitcomb earned B.D., Th.M., and Th.D. degrees, the latter in 1957. His doctoral dissertation concerned the Genesis Flood, after his interest was captured by a chapel visit to Grace by Dr. Henry Morris. These two men coauthored the classic *Genesis Flood* in 1961. The Creation Research Society was founded two years later in 1963, and John helped guide its doctrinal position. He also wrote several *Quarterly* articles over the years.

Dr. Whitcomb spent 40 years, 1951–1990, on the faculty of Grace Seminary. I took all of John's campus courses, and our family also enjoyed having the Whitcombs as next-door neighbors. On the informal side, John was unbeatable in ping pong competition.

After John's first wife Edicene died at a young age, he married Norma, who survives. This second marriage brought together a combined family of six children.

Along with the *Genesis Flood*, Dr. Whitcomb wrote several additional books and charts, and made many Bible-teaching videos. His defense of biblical creation and conservative theology continues through these valuable resources. Thanks be to God for giving us godly examples such as Dr. John Whitcomb. CM

What's New in the Q?

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Math Matters

Our Amazing Sense of Hearing

by Don DeYoung, PhD

Hearing is our most precise and rapid-reaction sense. Even with eyes closed, we usually can detect the direction to a sound source. This binaural ability results from sound waves reaching one ear before the other, a time difference of about 0.5 milliseconds. In other words, we hear in stereo. Our other senses—sight, touch, smell and taste—are highly valuable, but less exact in nature. Our eyes, for example, see smooth motion when still pictures become video at 24 frames per second.

From start to finish, sound follows a chain of vibrations: a violin string, air molecules, eardrum, ossicles ear bones, oval window (the inner ear drum), fluid and 12,000 hair follicles (cilia) in the spiral-shaped cochlea, electrical pulses in the nerves, and finally, vibrating electrons within the brain.

A healthy ear detects sound frequencies ranging from 20–20,000 cycles/second or hertz. A sensitive ear can register sound intensities down to negative decibel levels. At this minimum of loudness, the eardrum moves a distance less than the diameter of an atom, 10^{-10} meter or one angstrom.[1]

The ear is equipped with multiple feedback mechanisms for our protection. If a sudden, loud sound occurs, the eardrum begins to vibrate beyond a safe level and could be damaged by tearing. Just as quickly, however, a signal from the brain causes the eardrum muscles to contract and tighten the eardrum for its protection. Loud sounds also trigger a reduction in the amplification ability of the cilia hair cells.[2] A credible suggestion is that these safety mechanisms were built into our hearing from the beginning of time, awaiting application in the modern "noisy" world.

The Psalms express the wonder of our senses—
Does he who implanted the ear not hear? Does he who formed the eye not see? (Psalm 94:9)
I will praise you because I am fearfully and wonderfully made. (Psalm 139:14a)

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1. Massachusetts Institute of Technology (2019, January 16). Mechanism helps explain the ear's exquisite sensitivity: A critical gel-like structure in the inner ear moves according to a sound's frequency, researchers find. *ScienceDaily*. Retrieved March 14, 2020 from www.sciencedaily.com/releases/2019/01/190116110945.htm

2. Robinson, R. (2009). Feedback system protects inner ear. *PLoS biology*, 7(1), e1000012. https://doi.org/10.1371/journal.pbio.1000012

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On Top of the World with Man's Best Friend

by Jean K. Lightner, DVM, MS

Q: How did the Tibetan mastiff breed become so well adapted to high altitude environments?

A: While we may not have a full answer, recent research has given us a good idea of at least some of what was involved.

What is a Tibetan Mastiff?

The Tibetan mastiff is an ancient dog breed used to guard flocks at high altitudes, such as in the Himalayas and Tibetan Plateau. Compared to other dogs, they perform incredibly well under the hypoxic (low oxygen) conditions found in these regions. Similar to other animals and birds that have adapted to high altitudes, they carry mutations in a hemoglobin gene.

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The Tibetan mastiff was bred to work at high altitudes, such as in the Himalayas and Tibetan Plateau.

By Dennis Jarvis from Halifax, Canada - DSCN5805 - Tibet at 15,000 feet, CC BY-SA 2.0, https://commons.wikimedia.org/w/index.php?curid=23450752.

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Differences in Hemoglobin

Hemoglobin is the molecule in red blood cells that binds to oxygen so it can be carried throughout the body. It is comprised of several parts (two alpha and two beta chains) that are coded by different genes found on different chromosomes. The Tibetan mastiff carries two different amino acids in its beta chain compared to all other dog breeds (at position 13, serine replaces glycine [G13S], and at position 14 methionine replaces leucine [L14M]; Signore et al., 2019).

Here we have an important question to ask: *How do we know these differences are from a mutation?* In other words, how do we know there has been a change in the DNA sequence compared to this dog's ancestors?

Unlike evolutionists, who base their conclusions on the assumption of universal common descent by way of mutations, creationists recognize that God created creatures according to their kinds (Genesis 1:11–12, 21, 24–25). Thus, creationists recognize that the variety we see today has two possible sources: created alleles (versions of the gene) that were present in the ancestors, as well as mutations.

Usually, we would expect alleles that were in early ancestors (e.g., those coming off the Ark after the Flood) to be found in many different populations today. This is because many of their offspring (statistically about half) would carry the allele, and it would be carried throughout the earth as it was being repopulated.

Since the two hemoglobin amino acids we find in the Tibetan mastiff are unique to this dog breed, it seems unlikely that this variation was part of a created allele. Adding to this evidence is its absence from the sequence of all other surveyed canids (i.e., animals in the family Canidae, which creationists generally believe to be from a single created kind), with one exception—the Tibetan wolf (Lightner, 2012; Signore et al., 2019).

Tibetan mastiff
https://commons.wikimedia.org/wiki/File:Aigrette_Velikiy_(Tsaluma_say_strazce_z_Tibetu_x_Legenda_Tibeta_vlastelin_kolets).jpg

A Match Almost Made in Heaven

Dogs and wolves are closely related. Domestic dogs were bred from wolves, and they can still interbreed today. In fact, this is why the species designation for dogs has changed since I was a child; they were once *Canis familiaris*, but now they are considered a subspecies of the wolf, or more specifically *Canis lupus familiaris*. The Tibetan wolf (*Canis lupus laniger*) is a high altitude subspecies of gray wolf that can be found at elevations over 5000 feet.

Comparison of the gene coding for the beta chain of hemoglobin shows such a high level of similarity it indicates that the Tibetan mastiff picked up this allele by hybridizing with the Tibetan wolf living in this region.

This leads us to another interesting question, *how did the Tibetan wolf acquire this allele*? It must be from some kind of mutation, since no other wolves or canids (save the Tibetan mastiff) carry it. It is clear from various studies that both unique amino acids are necessary at these precise locations in the beta chain to confer the increased oxygen binding ability that makes this version of hemoglobin adaptive at high altitudes.

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Interestingly, the DNA sequence found in the adaptive allele of the Tibetan wolf and mastiff is also found on a neighboring pseudogene (which looks much like a gene that codes for beta globin, but it is not copied to make a protein). Various bioinformatic methods imply that this adaptive sequence was overwritten onto the beta globin gene in the wolf.

When a portion of DNA is written over another portion, it is referred to as gene conversion. In this case, it is not homologous (i.e., with the same sequence on the other copy of DNA), but interparalogous, meaning between two similar portions of DNA that are not at the same locus (place).

DNA being copied from one location onto another is actually well known to be important in the immune system function of many animals. For example, in chickens this plays an essential role in antibody formation (Ratcliffe, 2005). In a number of species, gene conversion is believed to be one mechanism by which healthy diversity is maintained in major histocompatibility complex (MHC) genes, which play important roles in immune function (Reusch and Langefors, 2005; Spurgin et al., 2011; Klitz et al., 2012; Bahr and Wilson, 2012).

Adaptation: by Accident or Design?

So how does the creationist view of this adaptation differ from that of the evolutionist's? In the traditional evolutionary view, all mutations are just accidents, or random copying errors. However, gene conversion is not some

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accidental process. It requires numerous enzymes which work together in a well-controlled fashion to accomplish the change. Creationists recognize that a wise Creator is needed for life to have this complex ability to change the sequence of DNA through gene conversion.

However, even complex mechanisms can occasionally malfunction. So, was the gene conversion inferred in the Tibetan wolf an accident? Did things not line up right so the gene conversion occurred between different genes? Or may there have been some environmental factor that increased the chance of a gene conversion in this strategic region?

While we don't know for certain, the latter possibility seems very plausible from a Design perspective. Given how frequently mutations in hemoglobin have arisen in various species that have adapted to high altitudes, and the time for these changes in DNA to occur in a "young-earth" timeline, I think it is very plausible that environmental factors can influence the likelihood of adaptive mutations occurring in the genome.

Adaptation clearly points to a Creator. It requires a complex design that not only allows for the original organism to survive and reproduce, but it allows for changes as the organism enters new environments with unique challenges. Random mutation and natural selection cannot explain the origin of organisms or of adaptive DNA changes.

Your righteousness
is like the highest mountain;
Your judgments,
like the deepest sea.
Lord, You preserve
man and beast.
Psalm 36:6 (CSB)

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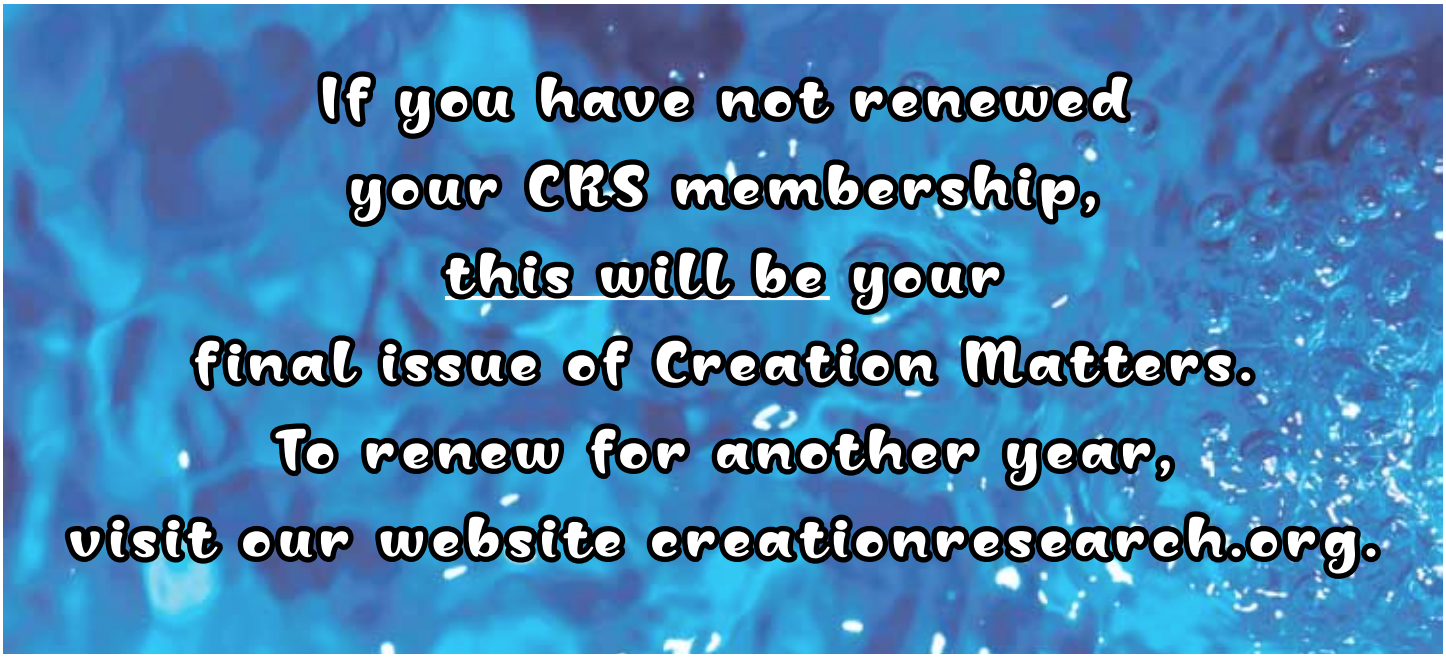

Summaries of Cutting-edge Research from *Creation Research Society Quarterly*

Summaries compiled by Jean K. Lightner, DVM, MS

Creation research that engages the current scientific literature and builds the creation model is crucial; CRS exists to support and publish such research. Only through high quality research can we equip others with strong, sound apologetic arguments that demonstrate the robustness of the creation model over that of evolution.

Divided Views on the Significance of Peleg

Peleg, the son of Eber, is mentioned in Genesis 10:25; he was given the name because in his days the earth was divided (from the Hebrew root transliterated PLG). There are two other verses in Genesis 10 that mention a division (5 and 32), but they use a different Hebrew word (from the root PRD). The traditional view has been that all three are referring to the division of languages and subsequent dispersion of people which is described in more detail in Genesis 11. An alternative view is that the division Peleg was named for was geologic. If the first view is correct, the information in the text is helpful for estimating the time of the Tower of Babel; if the second view is correct, we are given information that may help us understand post-Flood geographic history.

In the Summer 2019 issue of the *Creation Research Society Quarterly* (*CRSQ*), Dr. James Johnson examines this topic in more detail. In addition to a detailed word study, the works of theologians and geologists are considered. The noun derived from the Hebrew root PLG usually means river. Johnson proposes that a catastrophic "riverization" may have taken place, which inspired Peleg's name.

Johnson, J.J.S. 2019. Rightly "dividing" the word about Peleg: Was Earth's unusual "division" during Peleg's lifetime a linguistic event or a geographic event? *Creation Research Society Quarterly* 56:4–16.

Origin of the Alboran Basin

The Alboran sea basin is the Western-most part of the Mediterranean Sea, which lies between Spain and two north African countries, Morocco and Algeria. In the Summer 2019 *CRSQ*, Mike Oard provides a second article discussing its possible origin. Various problems with secular models are discussed, and Oard provides further reasons to support his hypothesis that this region was formed by an impact crater around the time of the Flood.

Oard, M.J. 2019. Is the Alboran Basin, Western Mediterranean, an impact crater? Part II: Dynamics. *Creation Research Society Quarterly* 56:26–39.

Can the Flood Explain "Missing" Ice Age Forests?

In an effort to stimulate thinking and promote further creation research, Dr. Jake Hebert (2019) discusses how secular scientists have been puzzled by the dearth of trees, even in unglaciated areas, from the supposed millions of years of the Pleistocene (Ice Age) Era. He provides a brief outline of the issues involved, that could lay a foundation for someone interested in pursuing the topic in more detail.

Hebert, J. 2019. "Missing" Ice Age forests: evidence for the Flood? *Creation Research Society Quarterly* 56:4

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Prayer Matters

Praise: We thank God for each one of you who contributes through prayer, finances, and service as we seek to glorify God through understanding his Creation. We are also thankful we live in a digital age; thus, so far, we have been able to continue to work on our publications, with a few hurdles, despite the current coronavirus pandemic.

Prayer: Please continue to pray for the society. As with most other organizations, we have suffered adverse events from the measures taken to decrease the spread of COVID-19. The future is uncertain, so more significant problems could arise. The CRS Board continues to lift up our supporters. We are in this together, for the glory of God.

Thanks Again!